Decreased testosterone studied in alcoholics

Chronic long-term alcohol abuse acts directly or indirectly at the level of the pituitary and not the gonad in decreasing testosterone secretion in men and rats, Charles D. Lox, Orene Peddicord, M. W. Heine, and F. S. Messiha of the Departments of Obstetrics, Psychiatry, and Pathology, Texas Tech University School of Medicine told the 2nd Annual Conference on Alcohol held in El Paso, Texas, on February 24-25, 1978. The team studied 14 male inpatients who were admitted for alcohol detoxification. Prolactin levels were all within normal limits, but blood testosterone was undetermined to be below normal in 42% of the men. However, there was no statistically significant relationship between testosterone and blood alcohol, indicating that the circulating levels of blood testosterone were independent of the concentration of blood alcohol.

Also at the conference A. Petrin and A. Sessa of the Institute of General Pathology, University of Milan, reported that the impairment of protein synthesis by ethanol in the liver and by acetaldehyde in several extrahepatic tissues may play a role in the pathogenesis of alcohol toxicity. The results of their studies also demonstrate that co-substrates and amino acids can reduce the effects of ethanol and acetaldehyde on tissue protein synthesis.

M. T. Koptezsky, M. Hughes, and C. Barnes of the Department of Physiology, Texas Tech University School of Medicine, reported tests that seem to confirm the hypothesis that the altered sensitivity to barbiturates and alcohol at high altitude has more to do with the adaptive changes in the tissues than with the simultaneous lack of oxygen. There is little doubt that the rat cardiac muscle tested is adapted to altitude poxia. Therefore, under normal oxygenation the only differences in the reactions to drugs must be due to differences in the properties of the tissues themselves. As a working hypothesis, the authors suggest that this phenomenon is due to adaptive changes in the cellular membrane.

Triumphs of naval alcoholism program recounted at Medical-Scientific Meeting in St. Louis

The U.S. Navy has developed a successful alcoholism treatment program, several Navy officials reported to the initial plenary session of "Currents in Alcoholism," the 9th Annual Medical-Scientific Meeting of the National Alcoholism Forum, held May 1-3 at St. Louis. The meetings were jointly sponsored by the National Council on Alcoholism, the American Medical Society on Alcoholism, and the Research Society on Alcoholism.

Navy Surgeon-General Vice-Admiral W. P. Arentzen hailed the modern Navy program and its attention to family concerns. The Navy's 22 alcohol rehabilitation facilities meet patient needs and increasingly those of the alcoholic's families as well.

Sensitivity to ethanol linked to acetaldehyde

Biological sensitivity to ethanol observed in some individuals and in some racial groups may be related to acetaldehyde concentrations in those individuals, Arthur R. Zeiner, Ph.D., of the University of Oklahoma Health Sciences Center told the National Drug Abuse Conference, held in Seattle, April 3-8. The exact mechanism for the sensitivity has not been worked out yet. However, the data relating to the disulfiram-alcohol reaction and the biological sensitivity to alcohol indicate that under both conditions the physiological reactions can be characterized by: facial flushing, increases in heart rate, decrease in blood pressure, increases in cardiac output, increases in rate and depth of respiration, and increases in digital pulse wave amplitude changes.

- Carl Pinsky, Ph.D. et al. from the Department of Pharmacology and Therapeutics, University of Manitoba, reported on mice studies that indicate that ethyl alcohol and possibly its metabolic product acetaldehyde can interfere with central endorphin.

- A hospital-based employees alcoholism program has been instituted at the Montefiore Hospital and Medical Center in New York City, according to Roger S. Mazze, Ph.D., and William Schneider, M.D., of the Albert Einstein College of Medicine. Over a one-year period, of the 120 employees (of a staff of 7,000) identified as alcoholic, more than 20% had participated in classroom sessions. More than 50% were identified as a result of direct referral from a program participant.

Alcohol and Nutrition

In the plenary session on "Alcohol and Nutrition," Craig J. McClain, M.D. et al. from the Departments of Medicine and (Continued on page 3)
**EDITORIAL**

**PAN's Final Issue**

As he embarks on a three-month sabbatical, your editor has much to contemplate. *Physician's Alcohol Newsletter* was born 12 years ago, and in that time there has been much advance in our knowledge about alcoholism, and even an improvement in death rates for cirrhosis. Many people with the disease have been helped, the many critics still decry the ineffectiveness of modern methods. The debate will go on.

We regret the external decisions that have caused this interruption in the flow of news to our readers. We want to thank the Christopher Smithers Foundation for its generous backing for the entire dozen years, the members of AMSA who have supported us with part of their dues and have funded this entire last issue, and to those NCA affiliates that have distributed PAN to physicians in their communities.

Other sources of funding are now being explored, and the editor would welcome comments about PAN from a reader's point of view. Write to: Frank A. Seixas, M.D., 2 Summit Drive, Hastings-on-Hudson, NY 10706.

Many people have helped in the challenging and rewarding task of producing PAN over the years. Special thanks are due to our associate editors for their efforts, and to Fred Zeserson and Morgan Press for their assistance in the early years. Thanks in particular to our current staff, Carol Levine and Bonnie Baya, and to Intergraphic Technology, Inc., our current printers.

**AMA newsletter on impaired doctors**

The AMA has introduced a newsletter for the exchange of information among those interested in the impaired physician problem. The newsletter will be published quarterly and distributed on a complimentary basis to medical society leaders, impaired physician committee members, and others who ask to be on the mailing list. Write to: AMA Impaired Physician Newsletter, Department of Mental Health, AMA, 535 North Dearborn Street, Chicago, IL 60610.

**BOOKS**


An explanation of the special problems of women who are problem drinkers, based on a series of interviews in half-way houses, women's groups, and with individuals.

**MEETINGS**

**Alcohol withdrawal symptoms transferred by blood transfusion**

Alcohol withdrawal symptoms can be transferred to a "teetotaler" by simple blood transfusion. The cause might be a stimulant factor or factors circulating in the alcoholic's bloodstream.

Kenneth Blum, Ph.D. and Arthur H. Briggs, M.D. of the Department of Pharmacology, University of Texas, have found that the convulsions induced by alcohol withdrawal in experimental mice can be transferred to mice never exposed to ethanol by a simple transfusion of cardiac blood. The transfer, they noted, can be effected by either blood plasma or crude blood cells, but the effect is greatest when cells are used. Dr. Blum, who presented their findings at the 62nd Annual Meeting of the Federation of American Societies for Experimental Biology held in April in Atlantic City, commented, "These findings may have important clinical relevance and provide the basis for developing a rational approach to treating alcohol withdrawal." He and Dr. Briggs believe that if scientists can characterize the transferable factor or factors responsible for withdrawal convulsions, they may better understand how alcohol dependence, tolerance, and withdrawal work.

**Workshop Discusses Ethnicity, Class, and Alcohol Use**

A Workshop on Ethnicity, Class, and Alcohol Use was held at Brown University, March 20, 1978. The goal of the workshop was to open new channels of communication among a small group of multidisciplinary investigators who have recently been studying ethnicity, class, and/or alcohol use, among various populations in the United States.

Anthony Thomas (Brown University) reported on his observational studies of all public drinking establishments in a small city in New England, and outlined a detailed typology of them. He offered an interpretation (in terms of functional "sociability") of the different kinds of behavior that characterize one type of establishment, which is generally frequented by men of a narrow range of socioeconomic classes.

Andrew Greeley and William McCready (National Opinion Research Center, University of Chicago) reported on a mail-survey of socialization, assimilation, drinking patterns, and drinking problems, among more than 1,000 families in five "ethnic groups" (Irish, Italians, Jews, Swedish Protestants, and English Protestants) in four major American cities. As invited discussant of both papers, Richard Fox (Duke University) underscored that differences in the preconceptions of those researchers are at least as important as the differences in methodology, and warned against the simplistic dialectic of "social drinking" as contrasted with "problem drinking." He also expressed concern about the tendency of some social scientists to focus on ethnic populations almost as if they were isolated entities, with little regard for links to political, economic, and other institutions that significantly affect what those people can do.

Andrew Gordon (Brown University) outlined ways in which beliefs and behaviors about drinking and about men's roles have changed among a Spanish-speaking group who recently migrated to a New England city from a Caribbean nation. In contrast to many other groups of rural-to-urban migrants, they appear to be drinking less and having fewer drinking problems than before.

Joy Leland (University of Nevada-Reno) described the ethnoscientific approach she is using among Native Americans in Nevada, to discern the ways in which women cope with male heavy-drinkers and alcoholics.

The workshop was organized by Andrew Gordon and Anthony Thomas, postdoctoral fellows in a NIAAA-sponsored research-training program at Brown University. It was jointly sponsored by the Department of Anthropology, and Program of Medicine Division of Biology and Medicine, of Brown University; Division of Substance Abuse, Department of Mental Health, Retardation, and Hospitals, of the State of Rhode Island; and the United States Brewers Association.
Further reports from St. Louis Meetings  
(Continued from page 1)

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Ethanol alters control of dopamine synthesis, concluded a team lead by B. Tabakoff of the University of Illinois Medical Center in Chicago. Since many symptoms of the ethanol withdrawal syndrome such as tremor and temperature anomalies may be mediated by the DA systems of the brain, they performed studies on the activity of tyrosine hydroxylase (TH) in striatum of mice after acute or chronic treatment with alcohol.

Henri Begleiter, Bernice Perjesz, and Robert Youdin of the Department of Psychiatry, Downstate Medical Center, SUNY, showed that in experimental rats exposed to alcohol for four weeks brain hyperexcitability is present several weeks after the last dose of alcohol. Their data suggest that the chronic intake of ethanol results in lasting central nervous system effects even after ethanol intake stops. Furthermore, the persistence of these residual effects is dependent upon the length and amount of initial exposure to ethanol. While these residual signs may not be overtly observable, they become quite conspicuous with the administration of a single dose of alcohol.

Time course studies were undertaken by Edward J. Gallaher, Ph.D. and Dora B. Goldstein, M.D. of the Department of Pharmacology, Stanford Medical Center, to determine the onset of tolerance to ataxic effects of ethanol in the mouse. During initial alcohol exposure, tolerance developed rapidly. The threshold rose from 1.8 to 2.7 mg/ml in 2.5 hours, following single ethanol injections. Tolerance was studied over longer periods; a maximal threshold of 3.0 mg/ml was reached in about 200 minutes.

Clinical Reports

A field test of the NCA Criteria for the Diagnosis of Alcoholism was carried out in Wisconsin by George R. Jacobson et al. from De Paul Rehabilitation Hospital, the Division of Motor Vehicles, and the Bureau of Alcohol and Other Drug Abuse. The subjects were 216 persons arrested on alcohol and driving offenses between October 1976 and April 1977. The data were compared to similar information collected from a baseline sample of 200 drivers referred for the same offense in the same counties approximately one year before the field-test period.

There are differences in the taste perception of ethanol between alcohol and non-alcoholic individuals, according to a study conducted by R. Gregg Settle, Ph.D., Monell Chemical Senses Center, University of Pennsylvania and the VA Hospital, Philadelphia. The detection (absolute) threshold and the hedonic response (preference) were investigated in outpatient alcoholics. Alcoholics had a higher threshold for ethanol than controls. Groups with a more recent drinking episode showed less of an aversion for alcohol than controls and than the group whose most recent drinking episode was 22 or more days ago, who responded similarly to controls. All groups demonstrated an increased aversion to higher concentrations of alcohol. Groups did not differ in their preference ratings for water.

Elevated serum vitamin B-12 appears to reflect alcohol abuse more accurately in females than in males, according to P.A. Goldman, C. B. Jankowski, B.S.N., and D. E. Drumm, M.D. of the Harvard Medical School and Peter Bent Brigham Hospital. The basis for this sex difference remains to be elucidated.

In a study of alcohol withdrawal using Gross's TSA, the severity of tremor was also assessed using a pneumatic tremograph. The tremor was shown to be not a simple vertical oscillation but a rotary movement of the finger, producing a circular trace. This study, by C. S. Mellor and R. Garguli of the Department of Psychiatry, Memorial University, St. John's Newfoundland, suggested that the tremor of alcohol withdrawal is not an exaggerated form of normal physiological tremor but is due to a different mechanism.

Psychiatric and Psychological Reports

In an attempt to investigate means of achieving rapid transformation of the attitudes of alcoholics, Marc Galanter, M.D. of the Albert Einstein College of Medicine studied two religious sects (the Divine Light Mission and the Unification Church) to examine the variables related to religious conversion. In both religious groups alcohol use declined significantly after conversion. He then related his findings to the clinical management of alcoholic patients.

Women and Alcoholism

In a study of 292 college women, 129 of them daughters of alcoholic fathers, Judith L. Barnes, Carole S. Benson, and Sharon C. Wilsnack of the Department of Psychology, Indiana University, found that the daughters of alcoholics reported more experience with drinking, drank more often and in larger amounts, and acknowledged more drinking-related problems than did daughters of nonalcoholics. The groups did not differ on a measure of depression. Alcoholics were perceived as more rebellious and distrustful than were nonalcoholics, and the daughters of alcoholics also perceived themselves as more rebellious and distrustful.

Comparing treatment prognosis for women and men alcoholics, Linda J. Beckman, Ph.D., of UCLA found no differences in abstinence rates for men and women on a one-year follow-up of 240 alcoholics, despite past evidence of a poorer treatment prognosis for women. Among women, those higher in anxiety and depression had a poorer prognosis; for men, lower self-esteem and external locus of control were associated with poor prognosis.

Poster Sessions

Robert L. Coutts, Ph.D. et al. of the Mesa County Mental Health Center reported eight areas of research which propose an interrelationship of the arousal function of the brain, certain neural tracts, biogenic neurotransmitters, minimal brain dysfunction, and losses of self-control as evidenced in neurosis, psychosis, sociopathy, and substance abuse. Losses of self-control correspond with specific dysfunctions of the brain which appear to be caused by imbalances of GABA, NE, DA, and 5-HT neurotransmitters of the arousal system at the interneuronal level of the cerebral cortex. Clinical evidence indicates that titrated dosages of GABA and monoamine-mimicking medications correct the dysfunction and improve self-control.

Cesium salts have antidepressant properties and can have potential use in negating some of the effects of alcohol, studies with rats have indicated. The work was conducted by F. S. Messhia, Ph.D., Departments of Pathology and Psychiatry, Texas Tech University School of Medicine.